Type Acceptance Test Report

UHF Data Transmit Module

FCC ID: B2FTALON-U

FCC Rule Part: 90

ACS Report Number: 03-0102-90TA

Manufacturer: Kantronics
Model: Talon UDC

RF Exposure Information

General Information:

Applicant:	Kantronics
ACS Project:	03-0102
FCC ID:	B2FTALON-U
Device Category:	Land Mobile or Base Station
Environment:	General Population/Uncontrolled Exposure
Operating Configuration:	Mobile or Fixed
Exposure Conditions:	20 cm or greater from the user or general population

Technical Information:

Antenna Type:	Unknown
Antenna Gain:	Up to 13 dBi

Transmission Information

Transmission Length:	200ms
Transmission Interval:	2 Minutes
Averaging Time Per 2.1309:	30 Minutes
Total "On Time"/Averaging time:	3 Minutes (15 transmissions x 200ms)
Duty Cycle (Worst Case):	10% Maximum (Regulated by voltage regulator due to excessive heat build up)
Correction Factor:	20dB
Transmitter Average Power:	17.5 dBm Max
Average System EIRP:	.060 W Corrected for Duty Cycle

MPE Calculation

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30xPxG}}{d} \qquad \text{Power Density: } P_d = (mW/cm^2) = \frac{E^2}{3770}$$

MPE Distance

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure							
Transmit Freq. (MHz)	**Radio Power (dBm)**	**Radio Power (Watt)**	**Antenna Gain (dBi)**	**Antenna Gain (Watt eq.)**	**E (V/m)**	**Power Density (mW/Cm2)**	**MPE Distance (cm)**
450	17.8	0.06	13	19.95	33.63	0.30	17.86

Installation Guidelines

The installation manual contains the following text advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

"The FCC, with its action in General Docket 79-144 of 1985-03-13 adopted a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment.

In accordance with FCC RF human exposure requirements, the Talon UDC device shall be installed such that 0.2 m of separation distance is maintained from the user or general population and the RF transmitting antenna"

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.